In the Claims:

1. (Previously Presented) A method of generating a high resolution image from a set of nearly identical low resolution images, each of which contains a reference signal, the method comprising:

identifying said reference signal in each of said low resolution images to relate the locations of said images,

identifying a first group of said low resolution images having red image information at a location most closely aligned with a first position in said high resolution image;

identifying a second, different, group of said low resolution images having red image information at a location most closely aligned with a second, different, position in said high resolution image;

processing the red image information from said first group of images to generate red data for the first position in said high resolution image; and

processing the red image information from said second group of images to generate red data for the second position in said high resolution image.

2. (Previously Presented) The method recited in claim 1 wherein the first and second positions correspond to positions in a Bayer square.

3. (Previously Presented) The method in claim 1 wherein pixels in said low resolution images have colors in accordance with a Bayer square.

4. (Previously Presented) The method recited in claim 1 wherein said reference signal comprises a watermark signal.

5. (Previously Presented) A method of generating a high resolution image from a series of nearly identical low resolution images, each of which contains a reference signal, the method comprising:

reading said reference signal from each of said low resolution images to

determine alignment of pixels in the image,

selecting images whose pixels are within a specified tolerance from specified positions, and

combining the selected images to generate a high resolution image,

wherein said reference signal comprises a watermark grid signal.

6-7. (Canceled)

8. (Currently Amended) A method of generating a high resolution image from a plurality of low resolution images, the method comprising,

capturing a plurality of low resolution electronic images of a subject, the subject defining a hidden reference signal,

using said reference signal to determine alignment of a plurality of said low resolution images, and

combining data from ~~**some but not all**~~ **at least some** of said low resolution images into a high resolution image.

9. (Original) The method recited in claim 8 wherein said low resolution images are aligned in accordance with the holes in a Bayer square.

10. (Previously Presented) The method recited in claim 8 wherein a plurality of low resolution images are captured and only those low resolution images which align to within a specified tolerance with holes in a Bayer square are used to form said composite image.

11. (Previously Presented) A system for generating a high resolution image from a series of nearly identical relatively low resolution images, the system including:

a watermark reading program for reading a watermark grid signal from each of said low resolution images to determine alignment of the pixels in the low resolution images relative to positions in a Bayer square,

an image selection program for selecting the low resolution images whose pixels

are within a specified tolerance from each position in the Bayer square, and

an image combination program for combining the selected low resolution images to generate a high resolution image.

12. (Previously Presented) A system for generating a high resolution images from a plurality of relatively low resolution images whose pixel values are in a Bayer square configuration, the system comprising:

means for determining which of said images align with each pixel position of a Bayer square to within a specified tolerance, and

means for combining multiple aligned low resolution images to fill in holes in a Bayer square.

13-15. (Canceled)

16. (Previously Presented) A method of generating a high resolution image from a plurality of low resolution images, the method comprising,

capturing a plurality of low resolution electronic images of a subject, the subject defining a hidden reference signal,

using said reference signal to determine alignment of a plurality of said low resolution images, and

combining at least some of said low resolution images into a high resolution image,

wherein said reference signal comprises a watermark grid signal.

17. (Previously Presented) A method of generating a high resolution image from a plurality of low resolution images, the method comprising :

capturing a series of low resolution images, each of which contains a reference signal,

reading said reference signal from each of said low resolution images,

aligning said low resolution images in accordance with said reference signal, and

combining said aligned low resolution images into a high resolution image;

wherein said reference signal comprises a watermark signal.

18. (Canceled)

19. (Previously Presented) A method of generating a high resolution image from a plurality of low resolution images, the method comprising:

capturing a series of low resolution images, each of which contains a reference signal,

reading said reference signal from each of said low resolution images,

aligning said low resolution images in accordance with said reference signal, and

combining at least some of said aligned low resolution images into a high resolution image,

wherein said reference signal comprises a watermark grid signal.

20. (Previously Presented) A method of aligning multiple low resolution images to form a high resolution image wherein both a hidden reference signal embedded in the low resolution images and visible image content are used to align said images.

21. (Currently Amended) A method comprising:

capturing first and second frames of similar image data using a common 2D image sensor that is subject to slight movement between frames, said sensor comprising a geometrical pattern of sensor elements, each element sensing light of one of at least first or second colors, wherein certain locations in said 2D sensor do not sense light of the first color, resulting in unknown first color information at various locations in the frames of image data captured by said sensor;

determining position information relating position of the first image frame to the second image frame**, said determining including decoding a signal steganographically encoded data in the first image frame, and decoding a signal steganographically encoded in the second image frame**; and

generating a composite image frame in which said unknown first color information at one of said various locations in the first frame of image data is mitigated

by reference to first color information from the second image frame that is determined to correspond to said one location.

22-23. (Canceled)

24. (Currently Amended) The method of claim 21 in which said determining includes correlating ~~with a pattern~~ **pattern data** in said first and second image frames.

25-27. (Canceled)

28. (Previously Presented) A method comprising:

capturing a first frame of image data using a 2D sensor, and capturing a second frame of image data using said same 2D sensor;

sensing a hidden watermark signal, useful in determining image rotation and scaling, in each of said frames of image data; and

by reference to said sensed hidden watermark signal, combining data from said first and second frames to produce an enhanced frame of image data.

29. (Previously Presented) The method of claim 1 wherein none of the low resolution images in the first group of images is included in the second group of images.

30. (Currently Amended) A method of generating a high resolution image from a set of nearly identical low resolution images, ~~each of which contains a marker signal,~~ the method comprising:

capturing low resolution images from a subject, the subject having previously been deliberately marked with a marker signal to facilitate machine processing of images captured therefrom;

identifying said marker signal in each of said low resolution images to relate locations of said images;

identifying a first group of said low resolution images having image information of a first primary color at a location most closely aligned with a first position in said high resolution image;

identifying a second group of said low resolution images having image information of a second, different, primary color at a location most closely aligned with said first position in said high resolution image;

processing the image information of the first primary color from said first group of images to generate data of said first primary color for the first position in said high resolution image; and

processing the image information of the second primary color from said second group of images to generate data of said second primary color for said first position in said high resolution image.

31. (Previously Presented) The method of claim 30 wherein none of the low resolution images in the first group of images is included in the second group of images.

32. (Previously Presented) The method of claim 30 wherein at least one of said low resolution images is included in neither said first nor second groups.

33. (New) The method of claim 8 wherein the subject comprises a printed article, and said print defines the hidden reference signal.

34. (New) The method of claim 33 wherein the article comprises printed artwork encoded with a digital watermark, the hidden reference signal comprising said watermark.

35. (New) The method of claim 8 that includes combining data from some, but not all, of said low resolution images into a high resolution image.

36. (New) The method of claim 24 in which said determining makes use of signals steganographically encoded in the first and second image frames, and also makes use of correlating visible image content.

37. (New) The method of claim 36 wherein said visible image content comprises fiducial marks provided on a subject being imaged.